



## CODE READER™ 1428 LASER-ETCH

Smaller, smarter and tougher, the ideal barcode reader for fast-paced manufacturing environments.

Sometimes a general purpose reader isn't what's needed. The unique requirements of direct part marking require a specialized optical platform to deliver the necessary decoding performance. Code has leveraged years of optical and decoding design experience to create the specialized CR1428.

With its low-contrast decoding precision, the CR1428 effortlessly increases first-pass read rates of laser-etched marks on consumer electronic products, while still outperforming in reading printed 1D, 2D and postal barcodes.

Combined with its advanced data formatting capabilities, the CR1428 provides accurate and reliable data integration into any manufacturing application to keep production lines moving efficiently.

One reliable partner, even in rigorous conditions.

The CR1428 is built to perform in a variety of conditions. IP54 housing protects the reader against harsh cleaning agents, dust and water ingress. Its durable construction can even handle multiple drops to concrete floors. If you're working in unpredictable environments or need to accurately read barcodes on a range of items, the CR1428 can stand up to whatever you throw its way.

### Features & Benefits

- Excels in reading Direct Part Marks, applied by laser or chemical etching, or inkjet printed
- High speed, omnidirectional reading of 1D and 2D barcodes
- Glare reduction technology for reading barcodes on shiny and mirrored surfaces
- Manual, motion detection and continuous scan barcode reading modes
- LED and programmable audible good read user feedback
- Reads barcodes reliably off PCs and mobile device screens
- Data editing and parsing versatility with JavaScript
- Use with Code's USB or RS232 Affinity® cables
- Extremely low power consumption
- Compatible with Code's CortexTools® software configuration utility



Optional Universal Stand

### Applications

Automotive, Semiconductor, Electronic Assembly, Pharmaceutical, Medical and Consumer Product industries

### Features at a Glance



# CODE READER™ 1428 SPECIFICATIONS

## Physical Characteristics

<b>CR1428 Dimensions</b>	5.5" H x 2.75" L x 2.0" W (140 mm H x 70 mm L x 50 mm W)
<b>CR1428 Weight</b>	3.9 oz (110 g)
<b>Color Options</b>	Available in dark gray
<b>IP Rating</b>	54

## User Environment

<b>Operating Temperature</b>	-20° to 55° C / -4° to 131° F
<b>Storage Temperature</b>	-30° to 65° C / -22° to 150° F
<b>Humidity</b>	5% to 95% non-condensing
<b>Decode Capability</b>	<p><b>1D:</b> BC412, Codabar, Code 11, Code 32, Code 39, Code 93, Code 128, IATA 2 of 5, Interleaved 2 of 5, GS1 DataBar, Hong Kong 2 of 5, Matrix 2 of 5, MSI Plessey, NEC 2 of 5, Pharmaco-de, Plessey, Straight 2 of 5, Telepen, Trioptic, UPC/EAN/JAN</p> <p><b>Stacked 1D:</b> Codablock F, Code 49, GS1 Composite (CC-A/CC-B/CC-C), MicroPDF, PDF417</p> <p><b>2D:</b> Aztec Code, Data Matrix, Data Matrix Rectangular Extension, Grid Matrix, Han Xin, Maxicode, Micro QR Code, QR Code, QR Model 1</p> <p><b>Proprietary 2D:</b> GoCode® (Additional License Required)</p> <p><b>Postal Codes:</b> Australian Post, Canada Post, Intelligent Mail, Japan Post, KIX Code, Korea Post, Planet, Post-net, UK Royal Mail, UPU ID-tags</p> <p><b>Direct Part Marks:</b> Barcodes applied by laser or chemical etching, or inkjet printed.</p>
<b>Image Output Options</b>	Formats: JPEG or PGM
<b>Field Selection</b>	Wide Field
<b>Data Editing</b>	JavaScript

## Working Ranges

CR1428 Performance

Test Barcode	Wide Field - Near	Wide Field - Far
	Min Inches (mm)	Max Inches (mm)
7.5 mil Code 39	1.53" (39 mm)	7.28" (185 mm)
10.5 mil GS1 DataBar	0.79" (20 mm)	6.69" (170 mm)
13 mil UPC	1.26" (32 mm)	10.24" (260 mm)
4.2 mil DM	1.57" (40 mm)	2.95" (75 mm)
5 mil DM	1.38" (35 mm)	3.35" (85 mm)
6.3 mil DM	1.06" (27 mm)	4.21" (107 mm)
10 mil DM	0.79" (20 mm)	6.50" (165 mm)
20.8 mil DM	0.98" (25 mm)	11.02" (280 mm)

Note: All samples were high quality barcodes and were read along a physical center line at a 10° angle. Default AGC settings were used. Accuracy= +/- 10%.

## Performance Characteristics

<b>Field of View</b>	Wide Field: 50° horizontal by 33.5° vertical
<b>Focal Point</b>	Approximately 100 mm
<b>Sensor</b>	CMOS 1.2 Megapixel (1280 x 960) gray scale
<b>Optical Resolution</b>	Wide Field: 960 x 640
<b>Pitch</b>	± 65° (from front to back)
<b>Skew</b>	± 60° (side-to-side)
<b>Rotational Tolerance</b>	± 180°
<b>Symbol Contrast Res.</b>	15% minimum reflectance difference
<b>Target Beam</b>	Single, blue targeting bar
<b>Ambient Light Immunity</b>	Sunlight: Up to 9,000ft-candles/96,890 lux
<b>Shock</b>	Withstands multiple drops of 6' (1.8 Meters to concrete)
<b>Power Requirements</b>	Reader @ 5vdc (mA): Typical = less than 450 mA; Idle = less than 80 mA; Sleep = less than 31 mA
<b>Memory Capacity</b>	128MB Flash ROM, 32MB RAM
<b>Communication Interfaces</b>	RS232, USB 2.0 (Generic HID, HID Keyboard, Virtual COM Port)
<b>Warranty</b>	<a href="http://www.codecorp.com/legal/warranty.php">www.codecorp.com/legal/warranty.php</a>

## Accessories

- Various Cable Options Available. Visit [www.codecorp.com/cables.php](http://www.codecorp.com/cables.php) for a list of compatible cables
- Universal Stand



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ADVANCED BARCODE READERS